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MAY 21 2020

United States District Court

for the

WESTERN

DISTRICT OF

OKLAHOMA

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U.S. DISTRICT COURT
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United States of America

v.

Shaorong Liu

Case No: M-20-210-P**CRIMINAL COMPLAINT**

I, the complainant in this case, state that the following is true to the best of my knowledge and belief.

On or about the date of November 8, 2010 through on or about August 2018, in Cleveland County, in the Western District of Oklahoma, the defendant violated:

*Code Section**Offense Description*

18 U.S.C. § 1349

Conspiracy to Commit Wire Fraud

This criminal complaint is based on these facts:

See attached Affidavit of Speical Agent John Kane, Federal Bureau of Investigation, which is incorporated and made a part hereof by reference.

☐ Continued on the attached sheet.
*Complainant's signature*

JOHN KANE

Special Agent

Federal Bureau of Investigation

Sworn to before me and signed in my presence.

Date: 5/21/20City and State: Oklahoma City, Oklahoma*Judge's signature*

Gary M. Purcell, U.S. Magistrate Judge

Printed name and title

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF OKLAHOMA**

No. _____

AFFIDAVIT IN SUPPORT OF A CRIMINAL COMPLAINT

I, John R. Kane, a Special Agent with the Federal Bureau of Investigation being duly sworn, depose and state as follows:

INTRODUCTION AND AGENT BACKGROUND

1. I am a Special Agent (SA) of the Federal Bureau of Investigation (FBI). I have been employed as an FBI SA for over 12 years. I am charged with the duty of investigating violations of the laws of the United States, collecting evidence in cases in which the United State is or may be a party in interest, and performing other duties imposed by law.

2. This affidavit is submitted to show that there is sufficient probable cause to secure a criminal complaint and arrest warrant and does not set forth each and every fact known concerning this investigation. The statements in this affidavit are based on my personal knowledge, information obtained from other law enforcement or persons with knowledge regarding relevant facts including criminal investigators of the Department of Energy (“DOE”) – Office of Inspector General (“OIG”), from federal agencies including

the DOE, from the review of records from various entities, as well as my training and experience.

PROBABLE CAUSE

3. Based on my training and experience and the facts as set forth in this affidavit, I believe there is probable cause that the owners and/or principals of MicroChem Solutions (“MCS”) —Shaorong Liu (“Liu”) and Juan Lu (“Lu”)— knowingly participated in a scheme to defraud the United States of federal research funds in violation of 18 U.S.C. § 1349 (conspiracy to commit wire fraud) as detailed below.

The Subjects and MCS

4. Liu and Lu are husband and wife.

5. Liu and Lu currently reside and previously resided during the relevant time period described in this affidavit at 212 Tisbury Road, Norman, Oklahoma, a residential property they purchased on December 21, 2007.¹

6. According to documents submitted to DOE by Liu and Lu, they have both been associated with MCS since about 2001 when they reportedly co-founded the company. MCS was most recently located at 212 Tisbury Road, Norman, Oklahoma.

7. Liu is currently and has been continually employed as a faculty member in the University of Oklahoma (“OU”) Department of Chemistry and Biochemistry since

¹ The specific dates listed in this affidavit should be read as “on or about” dates.

2008. His OU email address is shaorong.liu@ou.edu. Lu is currently listed as an Affiliate Research Scientist in the OU Department of Chemistry and Biochemistry. She was previously employed in that same OU Department as a scientist/researcher II from January 16, 2008 to November 16, 2012, was a non-employee with continued access to campus buildings starting January 2, 2013, and then was approved by OU to again work in Liu's OU lab starting January 1, 2016.

8. On November 8, 2010, March 31, 2012, and December 9, 2013, certified applications signed by Lu were electronically submitted to DOE through the website Grants.gov requesting funding for MCS from the DOE Small Business Technology Transfer ("STTR") program. Lu was listed on all three applications as the authorized representative for MCS and the person to be contacted at the email address of shaorong_liu@yahoo.com and the postal address of 212 Tisbury Road, Norman, Oklahoma. Lu's MCS title was listed as Chief Operation Officer ("COO"). Liu was listed on all three applications as the principal investigator ("PI"), to be contacted at the email address of shaorong.liu@ou.edu and postal address of the OU Department of Chemistry and Biochemistry, 101 Stephenson Parkway, Norman, Oklahoma. Liu's OU title was listed as Professor.

STTR Program

9. The mission of the STTR program is to support scientific excellence and technological innovation through the investment of federal research funds in critical

American priorities to build a strong national economy. Central to the program is expansion of the public/private sector partnership to include joint venture opportunities for small businesses and nonprofit research institutions.

10. The Small Business Administration (“SBA”) oversees the program, sets eligibility criteria, and issues policy directives applicable to all participating federal agencies, including DOE, which administer awards under this program. Each federal agency that participates in the STTR program issues its own funding announcements and policies, which implement SBA’s program criteria.

11. DOE publishes Funding Opportunity Announcements (“FOA”) to publicize the availability of financial assistance from the STTR program. An FOA provides applicants with information on multiple components of the application process, including eligibility requirements and other program rules.

12. In response to those FOAs, through an electronic submission system called Grants.gov, small businesses submit applications outlining the project they want to complete and the funding amount requested. DOE requires all subsequent documentation be submitted electronically via email to assigned program personnel or through other electronic submission systems.

13. Each DOE STTR application is signed, dated, and certified. Additional certifications are required after an awardee has been selected including representations to adhere to the general and specific terms and conditions for STTR grants and

representations that the company's financial management system meets required standards.

14. DOE issues STTR award payments via electronic transfer through the Department of Treasury's Automated Standard Application for Payments ("ASAP") system. DOE processes authorizations to add grant funds to an awardee's ASAP account. Awardees then use the ASAP.gov website to create electronic payment requests for funds to be transferred from their ASAP account to their bank account.

Statute Violations

15. DOE funded three STTR applications for a total award of \$2.1 million to MCS as listed in the table below:

Award # DE-SC0006351	Application Submitted	Award Amount	Period of Performance
Phase I	11/8/2010	\$100,000	6/17/2011-3/16/2012
Phase II	3/31/2012	\$1,000,000	6/17/2011-8/7/2014
Sequential Phase II	12/9/2013	\$1,000,000	6/17/2011-8/7/2016

16. After a grant applicant is selected for an award, the awardee works with DOE contract specialists to finalize the award, which includes electronically submitting additional required documentation to DOE.

17. On May 27, 2011, Lu emailed DOE a certification of the MCS financial system. This certification, signed by Lu, indicated she was the COO for MCS. The certification stated the MCS financial management system met the standards set forth in

the Code of Federal Regulations (“CFR”) governing federal government financial assistance awards for for-profit organizations. Specifically, Lu certified that the MCS financial management system included effective control of all funds to ensure costs charged to federal funds were reasonable and allowable; that it kept accurate, current, and complete records that documented the source and application of all DOE funds; and that the MCS system accurately tracked salary and wage charges to the DOE award.

18. Liu and Lu electronically submitted more than thirty claims to DOE for ASAP disbursement requests between August 31, 2011, and August 12, 2016. Each disbursement request caused an electronic transfer of DOE funds from the ASAP account to MCS Bank of America (“BoA”) account #xxxxxxxx4911, for which Liu and Lu both had signatory authority.

19. On multiple dates throughout the grant performance period and also after the grant concluded, Liu and Lu emailed SF425 financial reports to DOE. These reports included information on the ASAP cash disbursements, MCS cash receipts, MCS cash on hand, and the federal share of expenditures. These reports were compared with bank account records obtained from BoA for account #xxxxxxxx4911. The financial reports submitted to DOE matched bank records only in the ASAP disbursement amounts.

20. Liu and Lu intentionally spent a significant portion of the DOE funds for unallowable personal expenses and personal investments. For example, from June 2011 to June 2015, MCS’s BoA account #xxxxxxxx4911 contained deposits of \$1.55 million

in DOE funds. During that time, there were only two other deposit sources into that MCS account—\$431.03 from the University of Melbourne and \$796.61 transferred from a joint personal BoA checking account belonging to Liu and Lu, account #xxxxxxxx9562.

During this same time, purchases that were clearly personal and not allowable expenses from the approved DOE project budget were paid with funds from the MCS BoA account, #xxxxxxxx4911. For example, a vehicle was purchased from a Toyota dealership for \$37,448 and more than \$213,000 in credit card bills were paid.

21. A review of credit card bills paid with funds from MCS's BoA account #xxxxxxxx4911 revealed multiple personal charges at places such as hospitals, doctor offices, dentist offices, pharmacies, restaurants, grocery stores, car repair shops, department stores, furniture stores, sporting goods stores, shoe stores, clothing retailers, hair salons, gun ranges, dog kennels and veterinary hospitals, lawn services, zoos, marine stores, theatres, opera houses, museums, foreign travel, cruise ships, bowling alleys, winery and other liquor store purchases, stadiums, gas stations, pet stores, car washes, iTunes, Chinese TV and mobile services, and Ticketmaster. DOE funds were used to pay for travel that was not approved by DOE to multiple international destinations, such as Australia, China, Canada, the Netherlands, Spain, Japan, Turkey, and Malaysia.

22. When a DOE grant performance period ends, awardees are required to submit multiple documents and information as part of the grant close-out process detailing how DOE funds were spent. On December 29, 2016, Liu, representing himself

as the President of MCS, submitted signed and certified reporting documents to DOE as part of the grant close-out process. These documents included a Life Cycle Certification form that stated the information provided in this certification, the application, and all other information submitted to DOE in connection with the award, was true and correct, and he was aware that any intentional or negligent misrepresentation of the information may result in criminal, civil, or administrative sanctions.

23. On December 29, 2016, and December 17, 2017, Liu submitted untruthful certifications that \$2.1 million of DOE funds were spent on allowable expenses of the DOE research project, and he provided a false breakdown of the incurred expenses by category. For example, in December 2016 and December 2017 respectively, Liu submitted a certification to DOE that \$674,878 and later \$714,878 of DOE funds had been expended to pay for an OU subcontract. DOE approved an MCS budget request for funds to pay a subcontract to OU for salary and fringe benefits of Liu and a post-doc/graduate student, equipment and supplies, and indirect project costs incurred by OU, such as utilities and use of OU laboratory space. MCS subcontract invoices obtained from OU on June 15, 2018, totaled \$354,587.22 for the DOE subcontract.

24. A DOE contract specialist continued to exchange emails with Liu at shaorong.liu@ou.edu and/or shaorong_liu@yahoo.com—an email account used by both Liu and Lu and listed on the DOE applications as the contact email for MCS—into March 2018 regarding various submitted documents.

25. On March 21, 2018, a specialist from DOE Internal Review contacted Liu via email at shaorong.liu@ou.edu. The DOE specialist requested supporting documents for MCS's claimed incurred costs to reconcile the grant funds.

26. Liu electronically submitted documentation to the DOE Internal Review Specialist on April 2, 2018, from shaorong.liu@ou.edu; April 9, 2018, from shaorong.liu@ou.edu; June 4, 2018, from shaorong_liu@yahoo.com; and June 21, 2018, from shaorong_liu@yahoo.com, including what is detailed below.

27. On April 2, 2018 and April 9, 2018, Liu submitted, via emails from shaorong.liu@ou.edu, a revised breakdown of MCS expenses by category. This included \$769,522 of DOE funds to pay for an OU subcontract. Liu previously certified in December 2017 that \$714,878—and in December 2016 that \$674,878—of DOE funds had been used to pay for an OU subcontract. As detailed above, MCS invoices obtained from OU revealed OU only received approximately \$354,587 from MCS for DOE grant subcontract expenses.

28. The revised breakdown of MCS expenses by category submitted on April 2, 2018, also included \$500,256 for direct labor and \$187,600 for fringe benefits of the direct labor. On December 29, 2016, Liu submitted to DOE a lower amount of \$424,765 for direct labor and \$111,280 for fringe benefits of the direct labor. Additionally, on June 4, 2018, Liu submitted to DOE, via an email from shaorong_liu@yahoo.com, a copy of the MCS "Labor Ledger", which listed Liu and Lu's labor hours and pay by date. The

dates and amounts given in the "Labor Ledger" did not match the transfer dates and/or the transfer amounts reflected in account #xxxxxxx4911 records obtained from BoA.

29. Further, based on my training and experience, multiple records that Liu submitted to the DOE Internal Review specialist as supporting documentation to justify the reported MCS incurred costs appeared to be fraudulent, falsely created documents or altered genuine documents.

30. On June 4, 2018, Liu submitted to the DOE Internal Review specialist, via email from shaorong_liu@yahoo.com, invoices for the OU subcontract. The submitted invoices were compared to invoices obtained from OU, which revealed various discrepancies including the invoice amount, budget amount, invoice period date, current month expenditure amount, cumulative expenditure amount, and/or the date of OU invoice certification. This suggested the invoices submitted by Liu had been altered. Liu also submitted canceled check images for multiple MCS checks payable to OU. The submitted canceled check images were compared to canceled check images and associated records obtained from BoA for MCS's account #xxxxxxx4911.

Discrepancies were noted in the memo line text suggesting the checks submitted by Liu had been altered. Many of the canceled checks obtained from BoA listed what appeared to be multiple OU account numbers and/or invoice numbers on the memo line. Some of those account numbers or invoice numbers were missing on the canceled checks that Liu

submitted to DOE, making it appear that the total check amount was applied to particular DOE subcontract accounts and/or invoices.

31. On June 4, 2018, Liu also submitted to the DOE Internal Review specialist, via email from shaorong_liu@yahoo.com, a document titled "Transaction Ledgers/Statements and Supporting Documents for Other Direct Costs." This document contained invoices, credit card statements, and images of canceled checks for MCS's outsourcing expenses attributed to the DOE grant for fiscal years 2011 to 2016.

32. Liu submitted to DOE, invoices for outsourcing expenses from Autograph Design, including five invoices for 2013 and two invoices for 2016 along with images of MCS canceled checks. For example, 2013 invoice #1820 for \$5,266.81 and corresponding canceled check #219 submitted by Liu differed from canceled check #219 for \$5,176.81 obtained from BoA, suggesting the dollar amount of the canceled check image and the invoice submitted by Liu had been altered. The payee, date, and dollar amount for canceled check #172 that Liu submitted to DOE as proof of an April 1, 2016, payment of \$53,980.45 to Autograph Design for 2016 invoice number 1919 and 1921 differed from canceled check #172 obtained from BoA. Check #172 obtained from BoA was for \$420 paid to Chase Card Services on March 25, 2016. Furthermore, there were no debits to Autograph Design in BoA account #xxxxxxx4911 statements after 2013, suggesting the canceled check image submitted by Liu had been altered and the 2016 Autograph Design invoices submitted to DOE had been falsely created.

33. Further, Liu submitted a \$1,019.51 Cherokee Hills Scientific invoice, number 1168, dated May 11, 2016, for 2016 outsourcing along with a corresponding credit card statement listing the \$1,019.51 charge on May 26. The credit card statement submitted by Liu was compared to the respective monthly statement obtained from Chase. The Cherokee Hills Scientific charge did not appear on the statement obtained from Chase. Instead, the charge item appearing on the same statement line was a May 26 charge to “CTrip SH HUACHENG TRAVEL SHANGHAI” for \$166.70. These discrepancies suggest (1) the credit card statement submitted by Liu was altered to replace the actual merchant and charge amount with the Cherokee Hills Scientific information, and (2) the submitted invoice had been falsely created.

34. Finally, based on the investigation to date, it is my opinion, Liu worked with at least one other person in 2018 to submit multiple documents to DOE that contained false information and/or appeared falsely created and/or altered. For example, on March 21, 2018, Liu responded to a DOE Internal Review specialist via an email from shaorong.liu@ou.edu that stated “we” would get the requested information back to DOE as soon as possible. On April 4, 2018, Liu emailed DOE from shaorong.liu@ou.edu and asked the Internal Review specialist if “we” needed to redo everything or just company rates. On May 12, 2018, Liu responded to the DOE specialist via an email from shaorong.liu@ou.edu and stated that “we” were still working on gathering the information and had ordered bank and credit card statements. On June 4, 2018, Liu


submitted documentation to the DOE Internal Review specialist via an email from shaorong_liu@yahoo.com and stated that “we” put all the things together.

35. Liu’s use of “we” in the above described emails indicates that it is probable that one or more persons assisted Liu in preparing the fraudulent records that were submitted to DOE. Based on the investigation to date, there is probable cause to believe Lu—the COO and co-owner of MCS who was paid by DOE for work on the grant, requested ASAP disbursements, was an account holder on MCS’s BoA account #xxxxxxxx4911, and personally benefitted from the fraudulent use of DOE funds—is a conspirator.

CONCLUSION

36. Based on the above facts and on my experience and training, I submit that this affidavit supports probable cause to conclude Liu and Lu have committed violations of 18 U.S.C. § 1349 (conspiracy to commit wire fraud) and probable cause for the granting of an arrest warrant.

Respectfully submitted,



John R. Kane
Special Agent
Federal Bureau of Investigation

Subscribed and sworn to before me on May 21, 2020.



GARY M. PURCELL
United States Magistrate Judge